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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,382	12/19/2001	Robert J. Seymour	KCX-481 (17407)	5397

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Bernard S. Klosowski, Jr.  
Dority & Manning, Attorneys at Law, P.A.  
P.O. Box 1449  
Greenville, SC 29602

[REDACTED]

HUG, ERIC J

ART UNIT	PAPER NUMBER
1731	6

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/025,382	SEYMOUR ET AL.
	Examiner	Art Unit
	Eric Hug	1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## ***Office Action Summary***

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

## Disposition of Claims

4)  Claim(s) 1-35 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) 6-24 is/are allowed.

6)  Claim(s) 1-5 and 25-35 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)  The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All b)  Some \* c)  None of:

1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a)  The translation of the foreign language provisional application has been received.

15)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1)  Notice of References Cited (PTO-892) 4)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_ .  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948) 5)  Notice of Informal Patent Application (PTO-152)  
3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ . 6)  Other: \_\_\_\_ .

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-5, 25-27, and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liebeck (US 999,375) in view of Linkletter (US 4,087,319). Liebeck discloses a machine for manufacturing toilet tissue whereby the finished rolls of toilet paper are made in the same operation as the making of the tissue paper, thus eliminating the intermediate steps of winding into rolls, shipping the rolls to a converting facility, and unwinding the rolls before converting (includes perforating, slitting, and winding into product rolls). The paper machine is represented in Figure 1 as having a typical forming section, press section, and drying section. As soon as the web of paper leaves the last of the drying cylinders (5), the web is transported through a calender (11), pressure rolls (12), slitting and perforating devices (16), and to the winding device (17) for rolling into small rolls (see Figure 2). After the pressure rolls, the web is delivered to and continuously supported through the perforating and slitting devices, and then to the winding device by guide tapes (25). The converting devices co-act with the remainder of the paper machine in a manner so that the speeds are commensurate with the travel speed of the web leaving the drying cylinders. The difference between the claimed present invention and the paper machine of Liebeck is that the web in Liebeck is unsupported between the last dryer cylinder and the perforator/slitter devices.

Linkletter discloses a continuously advancing system for separating a tissue web from a Yankee dryer roll, creping the web, embossing the web, and reeling the web. Linkletter solves problems associated with unsupported tissue webs as they are conveyed from the dryer to the winder. Linkletter explicitly teaches that it is desired to transfer a tissue web from a dryer to a reel and thread the web through treatment devices in between the dryer and the reel by means of an endless fabric conveyor belt. The web is received from the dryer cylinder at the supporting end of the conveyor belt and is transported to the reel. Therefore, at the time of the invention, it would have been obvious to one skilled in the art to provide for continuous transfer and transport of the tissue web of Liebeck from dryer to winder by means of an endless conveyor belt as taught by Linkletter in order to eliminate unsupported draws between processing equipment.

With respect to the claims:

Claim 1: The method steps of forming, drying, converting, and winding into rolls of product form are taught by Liebeck. Combining the steps of transferring the web to a conveyor and performing a converting step while on the conveyor as taught by Linkletter leads to the claimed invention.

Claims 2, 3: The paper in Liebeck is dried before converting and the paper in Linkletter is dried before transferring from the dryer cylinder to the endless conveyor.

Claim 4: Liebeck teaches calendering and perforating. Linkletter teaches both calendering and embossing.

Claim 5: In Liebeck, it would be obvious to monitor the amount of paper desired and then sever the paper before the winding step once the desired amount is reached so that the formed roll has the proper size.

Claims 25, 26: The apparatus of Liebeck modified in view of Linkletter has the claimed elements as described above, namely a web forming apparatus, web transfer means, conveyance system, converting station, and a winding element.

Claim 27: The support belt is an endless fabric conveyor.

Claim 29: Liebeck makes an uncreped toilet paper. Otherwise, the method steps are those as described for claims 1-5 above.

Claims 30 and 31: Liebeck uses a calender having a calender roll and an opposing roll. Linkletter says a single nip calender may be present between the dryer and the winder.

2. Claims 28 and 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liebeck (US 999,375) in view of Linkletter (US 4,087,319) as applied to claims 25 and 29 above, and further in view of Smook (Chapter 23 of Handbook for Pulp and Paper Technologists). With respect to the converting operations of the claims, folding, embossing with two rolls, and coating on one or two sides are not expressly disclosed by Liebeck or Linkletter, however these are all well-known operations for paper. See Smook for evidence. Therefore, at the time of the invention it would have been obvious to one skilled in the art to incorporate any of these converting operations in the paper machine of Liebeck modified in view of Linkletter as desired for folding a sheet into products such as napkins, or for embossing a pattern into the sheet, or for providing the sheet with desired surface properties or appearance.

3. Claims 1-3, 25, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuller (US 1,315,924). Fuller discloses a paper machine for heavy paper (such as box board) comprising a forming section (cylinder mold and Fourdrinier), a dryer (22), web cutters (30) and a sheet stacker (table 32). The web is continuously supported in the forming section and dryer by wire 14 and then carried from the blowing roll 17 at end of the wire through to the stacking table by a carrying cloth 25 about pulleys 26, 27. Therefore, Fuller teaches conveying, continuously transferring to a conveyor after forming, converting the web (sheeting) as the web advances on the conveyor, then stacking the sheets (which is in a form ready for packaging). Although sheet stacking is not the same as winding, at the time of the invention, it would have been obvious to one skilled in the art that sheeting is a final converting operation which is equivalent in function to winding or folding the web, that is preparing the web into a final product form. Therefore the claims are obvious over the reference.

*Allowable Subject Matter*

Claims 6-24 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The prior art does not disclose or suggest a method for manufacturing a finished rolled paper web product without parent roll reeling and unwinding, whereby the method comprises all the steps of forming the web, drying the web, creping the web, continuously advancing the creped web to a first conveyor, guiding the web to a second conveyor, transversely spreading the web, processing the web, transversely perforating the web, severing the web, and winding into a rolled product.

The prior art teaches all of the above tissue converting steps operating off-line from the paper making machine. The converting operations are run at speeds which are far less than the running speed of a paper machine, and as a result are typically run without the need for continuous web support. Continuous support has become necessary in high-speed tissue making machines for creped and uncreped tissues. For example, Rugowski discloses continuous web support using a two- conveyor belt system for transferring the web from the dryer to the reel. However, there is no suggestion in the prior art to combine off-line converting operations at different running speeds with the two-conveyor belt support system used in manufacturing the tissue web.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kilpia et al (US 6,076,281) discloses a web finishing section in a paper machine comprising a dryer section, a calender placed immediately after the drying section, and a web spreader placed after the calender and just before the reel cylinder. Calender belts carry the web through the calender nips. The devices are arranged to minimize any unsupported draws between them and to shorten the length of the finishing section.

Williams (US 1,842,889) discloses a paper machine whereby a tissue paper is continuously supported between the last drying drum and a reel, and whereby the paper is slit into the desired width and stacked prior to reeling.

Hall (US 1,585,977) discloses continuously supporting a "wadded" (creped) web from the drying cylinder to the reel.

Kurth (US 5,806,432) discloses a process of converting and printing a paper web whereby the web is coated and/or calendered in the converting step and then directly printed without winding into a roll prior to printing. The web is rolled and cut into smaller rolls of width equal to that of the printer prior to converting and printing.

Rugowski (US 5,593,545 and US 5,591,309) discloses a tissue machine without an open draw for making tissue products.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 703 308-1980. The examiner can normally be reached on Monday through Friday, 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 703 308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9310 for regular communications and 703 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0651.

*Eric Hug*  
jeh  
January 17, 2003

*Steven P. Griffin*  
STEVEN P. GRIFFIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700